

### Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

1. (Currently amended) A laser device, comprising a laser beam emitter having an optical resonator and an optical fiber for guiding a laser beam from said laser emitter,, wherein said optical resonator has a resonator and a reflection mirror, wherein numerical apertures  $NA_i$ ,  $NA_e$  and  $NA_f$  have a relation of:  $NA_i < NA_e < NA_f$ , where the numerical aperture of the laser beam entering said optical fiber is  $NA_i$ , the numerical aperture of the laser beam emitted from said optical fiber is  $NA_e$ , the numerical aperture of said optical fiber is  $NA_f$ , and at least one of a length of said resonator or a curvature of said reflection mirror is determined so as to satisfy the condition that a parameter  $M^2$  of beam quality of a projected laser beam is within a range of  $8 \leq M^2 \leq 22$ , where  $M^2 = \pi W \cdot \theta / \lambda$  ( $W$  is a beam waist of a laser beam;  $\theta$  is a spreading angle; and  $\lambda$  is a wavelength of the laser beam).

2. (Currently amended) ~~An ophthalmological surgical system, comprising a~~ A laser device according to claim 1, further

comprising a slit lamp optical system, wherein the laser beam from said optical fiber enters a pupil of an eye via said slit lamp optical system, wherein the numerical apertures  $N_{Am}$  and  $N_{Amax}$  have a relation of:  $N_{Am} \leq N_{Amax} \leq N_{Af}$ , where the numerical aperture of the pupil is  $N_{Am}$  and the maximum numerical aperture of the laser beam is  $N_{Amax}$ , and ~~wherein said laser device emits a laser beam in such manner that~~ a parameter  $M^2$  of beam quality is within a range of  $8 \leq M^2 \leq 22$ .

3. (Currently amended) A laser device according to claim 1, wherein the laser beam emitted from said laser beam emitter is propagated in ~~an~~ said optical fiber, wherein a core diameter of said optical fiber is ~~from 50  $\mu m$  to 75  $\mu m$~~ , and the numerical aperture  ~~$N_{Af}$~~   $N_{Ae}$  of the laser beam emitted from said optical fiber is in a range of  $0.06 \leq N_{Ae} \leq N_{Af}$   ~~$0.10 \sim 0.12$~~ .

4. (Currently amended) A laser device according to claim 1, wherein the laser beam emitted from said laser beam emitter is propagated in ~~an~~ said optical fiber, wherein a core diameter of said optical fiber is 75  $\mu m$ , and the ~~exit~~ numerical aperture  $N_{Ae}$  of the laser beam emitted from said optical fiber is in the range of  $0.06 \leq N_{Ae} \leq 0.1$ .